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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,592	03/31/2004	Brandon C. Barnett	P15984	8433
25694	7590	10/30/2007		
INTEL CORPORATION C/O INTELLEVATE, LLC P.O. BOX 52050 MINNEAPOLIS, MN 55402			EXAMINER PHAN, HANH	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 10/30/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/816,592

Applicant(s)

BARNETT ET AL.

Examiner

Hanh Phan

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office Action is responsive to the Amendment filed on 08/04/2007.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama (US Patent No. 6,178,022) in view of Agazzi et al (Pub. No.: US 2002/0012152) **OR** Kropp (US Patent No. 6,885,826) **OR** Suzuki (US Patent No. 6,897,424).

Regarding claim 1, referring to Figures 4-6, Yoneyama teaches an apparatus (i.e., an optical transmitter, Fig. 4) comprising:

a laser unit (i.e., optical pulse signal generating circuits 4, Fig. 4) having a plurality of input ports and each of the plurality of input ports receive an electrical data signal (i.e., DATA1, DATA2,..., DATAm, Fig. 4), the laser unit (i.e., optical pulse signal generating circuits 4, Fig. 4) including at least one pulse laser (i.e., short pulse light source 12, Fig. 4) to generate at least one pulse train (i.e., Figs. 4 and 5, col. 5, lines 65-67 and col. 6, lines 1-8 and lines 45-48); and

the laser unit (i.e., optical pulse signal generating circuits 4, Fig. 4) including a plurality of laser modulators (i.e., optical modulators 13, Fig. 4) to receive a particular pulse train (i.e., optical modulator 13 receives a pulse train from a short pulse light source 12, Fig. 4) and a particular electrical data signal (i.e., optical modulator 13 receives an electrical data signal such as DATA1, Fig. 4), each of the plurality of laser modulators (i.e., optical modulators 13, Fig. 4) to encode its received electrical data signal onto its received pulse train by selectively passing pulses (i.e., Figs. 4 and 5, col. 5, lines 65-67, col. 6, lines 1-67 and col. 7, lines 1-12).

Yoneyama differs from claim 1 in that he fails to teach a processor and a plurality of laser drivers in the processor, each of the plurality of laser drivers to generate an electrical data signal at a corresponding one of a plurality of output ports distributed on a surface of the processor. Agazzi et al, from the same field of endeavor likewise teaches an optical transmitter (Figure 9). Agazzi et al further teaches a processor (i.e., DSP, Fig. 9) and a plurality of laser drivers (i.e., laser drivers, Fig. 9) in the processor, each of the plurality of laser drivers to generate an electrical data signal at a corresponding one of a plurality of output ports distributed on a surface of the processor (i.e., Fig. 9, pages 4 and 5, paragraphs [0099]-[0102]) **OR** Kropp, from the same field of endeavor likewise teaches an optical transmitter (Figure 5). Kropp further teaches a processor (i.e., control device 5, Fig. 5) and a plurality of laser drivers (i.e., driver circuits 61, 62, 63, and 64, Fig. 5) in the processor, each of the plurality of laser drivers (i.e., driver circuits 61-64, Fig. 5) to generate an electrical data signal at a corresponding one of a plurality of output ports distributed on a surface of the processor (i.e., Fig. 5,

col. 1, lines 15-23, col. 6, lines 52-67 and col. 7, lines 1-23) **OR** Suzuki, from the same field of endeavor likewise teaches an optical transmitter (Figures 1 and 4). Suzuki further teaches a processor (i.e., CPU 30, Fig. 4) and a plurality of laser drivers (i.e., laser drivers 2-13, Figs. 1 and 4) in the processor, each of the plurality of laser drivers (i.e., laser drivers 2-13, Figs. 1 and 4) to generate an electrical data signal at a corresponding one of a plurality of output ports distributed on a surface of the processor (i.e., Figs. 1 and 4, col. 2, lines 60-67, col. 3, lines 1-23 and col. 7, lines 11-33). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the processor and a plurality of laser drivers in the processor, each of the plurality of laser drivers to generate an electrical data signal at a corresponding one of a plurality of output ports distributed on a surface of the processor as taught by Agazzi et al **OR** Kropp **OR** Suzuki in the system of Yoneyama. One of ordinary skill in the art would have been motivated to do this since allowing improving the data transmission bandwidth, reducing the size, space and cost of the whole of system.

Regarding claim 2, the combination of Yoneyama and Agazzi et al **OR** Kropp **OR** Suzuki teaches the pulse laser is mode-locked to a particular pulse frequency equal to a data rate of the data signal (i.e., Figs. 4-6 of Yoneyama, col. 6, lines 29-67 and col. 7, lines 1-2, and Fig. 5 of Kropp, col. 1, lines 15-23, col. 6, lines 52-67 and col. 7, lines 1-23 **OR** Figs. 1 and 4 of Suzuki, col. 2, lines 60-67, col. 3, lines 1-23 and col. 7, lines 11-33).

Regarding claim 3, Yoneyama further teaches the at least one pulse laser comprises a plurality of pulse lasers, each of the plurality of pulse lasers to provide a separate pulse train to a corresponding one of the plurality of laser modulators (i.e., Fig. 6, col. 6, lines 29-67 and col. 7, lines 1-12).

Regarding claim 5, Yoneyama further teaches each of the plurality of laser modulator (i.e., optical modulators 13, Fig. 4) comprises one of a Mach-zehnder interferometer or a variable optical attenuator (i.e., optical modulator 13 is a Mach-zehnder interferometer, col. 6, lines 58-60, col. 8, line 67 and col. 9, lines 1-2).

Regarding claims 6 and 21, Yoneyama teaches further comprising: a plurality of light conductors to direct the at least one pulse laser (i.e., as indicated in Figure 6, each of the plurality of light conductors separated by the optical coupler 13 to direct the optical pulse light source 12 to each of the plurality of optical modulators 13, Figure 6, col. 6, lines 29-67 and col. 7, lines 1-12).

Regarding claim 7, Yoneyama further teaches each of the plurality of light conductors comprises at least one of a waveguide or an optical fiber (i.e., as indicated in Figure 6, each of the plurality of light conductors separated by the optical coupler 13 to each optical modulator 13 comprises at least one of an optical fiber).

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-3, 5-7 and 21 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

  
**HANH PHAN**  
**PRIMARY EXAMINER**